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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/617,323  | 07/10/2003  | Joseph S. Stam       | GEN10 P-349D        | 2819             |
| 28469   | 7590        | 10/19/2004           | EXAMINER            |                  |
| PRICE, HENEVELD, COOPER, DEWITT, & LITTON,<br>LLP/GENTEX CORPORATION<br>695 KENMOOR, S.E.<br>P O BOX 2567<br>GRAND RAPIDS, MI 49501 |             |                      | TRAN, THUY V        |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2821                |                  |

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/617,323             | STAM ET AL.         |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Thuy V. Tran           | 2821                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/5/04 &amp; 1/2/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This is a response to the Applicants' filing on July 10<sup>th</sup>, 2003. In virtue of this filing, claims 1-35 are currently presented in the instant application.

#### ***Information Disclosure Statement***

1. The information disclosure statements (IDSs) submitted on January 2<sup>nd</sup>, 2004 and January 5<sup>th</sup>, 2004 are in compliance with the provisions of 37 CFR 1.97. Accordingly, these information disclosure statements are being considered by the examiner.

#### ***Drawings***

2. The drawings submitted on July 10<sup>th</sup>, 2003 are accepted.

#### ***Specification Objection***

3. The specification of the disclosure is objected to because of the following informalities:  
Page 1, paragraph [0001], line 3, --which is now U.S. Patent No. 6,593,698,-- should be inserted between “,” (first occurrence) and “which”.

Appropriate correction is required.

#### ***Claim Objections/ Minor Informalities***

4. Claims 1, 11-13, 20-22, and 28 are objected to because of the following informalities:  
Claim 1, line 6, “the” (first occurrence) should be deleted; and “the” (second occurrence) should be changed to --a--;  
Claims 11 and 12, “imager” should be changed to --image array sensor-- (for consistency of terminology);  
Claim 13, line 2, “sensed” should be deleted;

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Claims 20 and 21, "imager" should be changed to --image array sensor-- (for consistency of terminology);

Claim 22, line 2, "sensed" should be deleted;

Claim 28, line 6, "the" should be changed to --a--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 25-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 25, the recitation "said controller is further configured to automatically calibrate ... said at least one detected image" in lines 5-7 renders the claim indefinite since it is mis-descriptive. The calibration of the controller cannot be a function of the detected image as recited. Clarification is required.

Claims 26-27 are also rejected under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, since they are dependent on claim 25.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1-24 and 28-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Schofield et al. (U.S. Patent No. 5,796,094).

With respect to claim 1, Schofield et al. discloses, in Figs. 2-3 and 10, an automatic exterior light control comprising (1) an image array sensor [14] (see Fig. 10); the image array sensor [14] comprises an array of pixel sensors [38] (see col. 4, lines 17-20), and (2) a controller [13, 16] (see Fig. 3) configured to generate an exterior light control signal; the controller [13, 16] further configured to inherently generate a rate of change of the exterior light control signal (since both the detected signal including timing and the detection threshold with respect to ambient light detection are inputted to the lighting control [13]; see Fig. 3) that is a function of an ambient light level (which is one of variables selected from a group comprising a current inclination angle of a headlight, an estimated range of an oncoming vehicle, an estimated range of a leading vehicle, and an ambient light level, as claimed).

With respect to claim 2, Schofield et al. discloses that the exterior light control signal is an intensity signal (see col. 3, lines 48 and 57-64; col. 5, line 30).

With respect to claim 3, Schofield et al. discloses that the exterior light control signal is a horizontal direction signal (see col. 2, line 56; col. 3, lines 57-64).

With respect to claim 4, Schofield et al. discloses that the exterior light control signal is a vertical direction signal (see col. 2, line 57; col. 3, lines 57-64).

With respect to claim 5, Schofield et al. discloses, in Figs. 2-3 and 10, an automatic exterior light control comprising (1) an image array sensor [14] (see Fig. 10); the image array sensor [14] is configured to inherently sense an illumination range and other vehicles (since the state of the headlights can be adjusted in response to the presence/absence of other light sources/vehicles; see col. 1, line 67 – col. 2, lines 15 and 41-43; col. 6, line 9), and (2) a controller [13, 16] (see Fig. 3); the controller [13, 16] is configured to generate a continuously variable exterior light control signal as a function of the illumination range and the other vehicles (see col. 1, line 67 – col. 2, lines 15 and 41-43; col. 3, lines 57-64; and col. 6, line 9).

With respect to claim 6, Schofield et al. discloses that the illumination range is of a continuously variable headlight of a controlled vehicle (see col. 3, lines 57-64).

With respect to claim 7, Schofield et al. discloses that the headlight is a low beam headlight (see col. 3, lines 48-52; col. 5, lines 33-37).

With respect to claim 8, Schofield et al. discloses that the headlight is a high beam headlight (see col. 5, lines 33-39).

With respect to claim 9, Schofield et al. discloses that the other vehicle is the oncoming vehicle (see col. 5, line 62 – col. 6, line 9).

With respect to claim 10, Schofield et al. discloses that the other vehicle is the leading vehicle (see col. 5, line 62 – col. 6, line 9).

With respect to claim 11, Schofield et al. discloses that the image array sensor [14] is configured to sense the illumination range as the illumination range is adjusted (see col. 1, line 67 – col. 2, line 5).

With respect to claim 12, Schofield et al. discloses that the image array sensor [14] and the controller [13, 16] are configured to provide a positive feedback [96] (see Fig. 3) to insure that the illumination range is as desired (see col. 1, line 67 – col. 2, line 5).

With respect to claim 13, Schofield et al. discloses that the sensed illumination range is an upper vertical limit (or high beam headlight; see col. 5, lines 33-39).

With respect to claim 14, Schofield et al. discloses that the sensed illumination range is an outer lateral limit (see Figs. 11a-c; col. 9, lines 60-61).

With respect to claim 15, Schofield et al. discloses that the sensed illumination range is an intensity (see col. 3, lines 48-49).

With respect to claim 16, Schofield et al. discloses, in Figs. 2-3 and 10, an automatic exterior light control comprising (1) an image array sensor [14] (see Fig. 10); the image array sensor [14] is configured to inherently sense an illumination range (since the state of the headlights can be adjusted in response to the presence/absence of other light sources/vehicles; see col. 1, line 67 – col. 2, lines 15 and 41-43; col. 6, line 9), and (2) a controller [13, 16] (see Fig. 3); the controller [13, 16] is configured to generate a continuously variable exterior light control signal as a function of the illumination range (see col. 1, line 67 – col. 2, lines 15 and 41-43; col. 3, lines 57-64; and col. 6, line 9).

With respect to claim 17, Schofield et al. discloses that the illumination range is of a continuously variable headlight of a controlled vehicle (see col. 3, lines 57-64).

With respect to claim 18, Schofield et al. discloses that the headlight is a low beam headlight (see col. 3, lines 48-52; col. 5, lines 33-37).

With respect to claim 19, Schofield et al. discloses that the headlight is a high beam headlight (see col. 5, lines 33-39).

With respect to claim 20, Schofield et al. discloses that the image array sensor [14] is configured to sense the illumination range as the illumination range is adjusted (see col. 1, line 67 – col. 2, line 5).

With respect to claim 21, Schofield et al. discloses that the image array sensor [14] and the controller [13, 16] are configured to provide a positive feedback [96] (see Fig. 3) to insure that the illumination range is as desired (see col. 1, line 67 – col. 2, line 5).

With respect to claim 22, Schofield et al. discloses that the sensed illumination range is an upper vertical limit (or high beam headlight; see col. 5, lines 33-39).

With respect to claim 23, Schofield et al. discloses that the sensed illumination range is an outer lateral limit (see Figs. 11a-c; col. 9, lines 60-61).

With respect to claim 24, Schofield et al. discloses that the sensed illumination range is an intensity (see col. 3, lines 48-49).

With respect to claim 28, Schofield et al. discloses, in Figs. 2-3 and 10, an automatic exterior light control comprising (1) an image array sensor [14] (see Fig. 10); the image array sensor [14] comprises an array of pixel sensors [38] (see col. 4, lines 17-20), and (2) a controller [13, 16] (see Fig. 3) configured to generate an exterior light control signal; the controller [13, 16] further configured to inherently generate a rate of change of the exterior light control signal (since both the detected signal including timing and the detection threshold with respect to light source detection are inputted to the lighting control [13]; see Fig. 3) that is a function of a brightness of a detected light source (see col. 2, lines 11-14).



With respect to claim 29, Schofield et al. discloses that the exterior light control signal is an intensity signal (see col. 3, lines 48 and 57-64; col. 5, line 30).

With respect to claim 30, Schofield et al. discloses that the exterior light control signal is a horizontal direction signal (see col. 2, line 56; col. 3, lines 57-64).

With respect to claim 31, Schofield et al. discloses that the exterior light control signal is a vertical direction signal (see col. 2, line 57; col. 3, lines 57-64).

With respect to claim 32, Schofield et al. discloses, in Figs. 2-3 and 10, an automatic exterior light control comprising (1) an image array sensor [14] (see Fig. 10); the image array sensor [14] comprises an array of pixel sensors [38] (see col. 4, lines 17-20), and (2) a controller [13, 16] (see Fig. 3) configured to generate an exterior light control signal; the controller [13, 16] further configured to inherently generate a rate of change of the exterior light control signal (since both the detected signal including timing and the detection threshold with respect to light source detection are inputted to the lighting control [13]; see Fig. 3) that is a function of a brightness of detected light source (see col. 2, lines 11-14), not a function of a rate of change in distance to a detected light source.

With respect to claim 33, Schofield et al. discloses that the exterior light control signal is an intensity signal (see col. 3, lines 48 and 57-64; col. 5, line 30).

With respect to claim 34, Schofield et al. discloses that the exterior light control signal is a horizontal direction signal (see col. 2, line 56; col. 3, lines 57-64).

With respect to claim 35, Schofield et al. discloses that the exterior light control signal is a vertical direction signal (see col. 2, line 57; col. 3, lines 57-64).

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***Remark***

9. Claims 25-27 are not being provided with either rejection(s) over art or indicated allowable subject matter since claim 25 is defective.

***Citation of relevant prior art***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Bauer et al. (U.S. Patent No. 6,550,949) discloses a vehicle system for enhancing rear vision from a vehicle.

Prior art Kobayashi (U.S. Patent No. 6,343,869) discloses a light unit for vehicle.

Prior art Schofield et al. (U.S. Patent No. 5,949,331) discloses a vision system for a vehicle.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuy V. Tran  
Examiner  
Art Unit 2821

10/06/2004

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written over the printed name and title.